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ABSTRACT OF THE DISCLOSURE

1           An electrode for use in a plasma arc torch has an insert designed to improve the service  
2 life of the electrode, particularly for high current processes. The electrode comprises an  
3 elongated electrode body formed of a high thermal conductivity material and having a bore  
4 disposed in a bottom end of the electrode body. The bore can be cylindrical or ring-shaped. An  
5 insert comprising a high thermionic emissivity material, and in some embodiments, a high  
6 thermal conductivity material, is disposed in the bore. The insert can be ringed-shaped or  
7 cylindrical.

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